



MEMO TO: All Lawn Bowling Clubs
FROM: Mario Battista, Dales Bowls Canada Agent
SUBJECT: Comparing Natural Vs Artificial Bowls Surfaces

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UPDATED: Sept.8 /09

Here is my reply to the key Frequently Asked Questions usually raised by clubs regarding the conversion of natural grass greens to artificial surfaces. The comments below, reference experience gained beyond the info provided in my sales sheets. The UPDATE refers to the photo of the new Terracotta Surround and the 2010 Commonwealth Games Dales success announcement.

SIZE: As you know, the common size for a regulation green is 120ft x 120ft, although up to 130ft is now allowed for championship play. Ballpark estimates are based on the 125 number. A precise quote will be provided in due course.

FINISHED SURFACE COMPARISON

NATURAL SURFACE

The green surface is bound by a wood or concrete border topped by a wooden cap referred to as a **Plinth**. A roughly, 2-inch deep **Ditch** surrounds the green. The outer wall of the ditch is simply termed the **Bank**. It rises 9 to 12-inches above the surface of the green and serves as a stop for overthrown bowls. It is commonly constructed of wood or concrete. The bank surface is usually concrete or mown turfgrass, useful for players and spectators.

ARTIFICIAL SURFACE

The main difference is that everything is covered. The **Plinth** and the **Ditch** are covered by the carpet as it wraps around the green and is tacked onto the Plinth. The Ditch is further covered by a recycled rubber infill so that the bowls sit up. And, the **Bank** is covered by an artificial tufted grass carpet to further protect the bowls.



Dales MASTERGREEN™ "County" Outdoor Artificial Surface



Rubber Ditch Infill and Artificial Grass Bank with Velcro lane number and divider. Right: New Terracotta Carpet Surround in Spanish LBC

SURFACE CONSTRUCTION

NATURAL SURFACE

The surface of the green bears directly on the play of the game and the skill involved in placing the bowls.

The turf is maintained from 1/8-inch (Hybrid Bermuda grass) to & or 1/4-inch (Creeping Bent grass) and the thatch produced by the grasses is ideally kept to an absolute minimum to achieve a hard, fast playing surface.

So important is the condition of the green's surface that an objective measurement of the time a bowl takes to travel a distance of 90-feet is used to compare green conditions. This measurement is called the "speed of the green". A green with a speed of 10-seconds is slow, one of 16-seconds is fast. This seemingly incongruous statement can be explained thusly: a hard, firm surface supports the bowl with less frictional drag, so a bowl can be thrown rather softly, yet still reach the end of the 90-foot distance.

A slow green, on the other hand, requires that the bowl be rolled harder and thus faster in order for it to overcome the friction imposed by thick, spongy thatch and/or saturated soil to reach the end of the 90-foot lane. This explains how a bowl rolled on a fast green actually takes longer to cover the given distance than it would on a slow green. Possibly, no other game played on a green is so closely tied to the condition of the surface of the green.

SITE PREP: NATURAL VS ARTIFICIAL

Drainage is the most important element of any site preparation for a new lawn bowling green. Whether you go Natural or Artificial, the foundation is similar, except that with the Natural you do not require the E-Layer, a savings of \$60,000. But, you acquire a \$15K to \$30K per year maintenance bill, depending on whether volunteers or city employees maintain it. A new Natural green will require a year before usage. An Artificial green is ready for play immediately. You can view the site prep for our artificial surface in detail on the HOME page of our resource website at www.dalesbowlscanada.ca . Drainage:5 days, E-layer:3 days, Carpet:7 days, Total: 15 actual days.

MAINTENANCE

NATURAL SURFACE

Constant cutting
Constant watering – 700,000 gals/yr.
Pesticide & Fungicide
Aerating & Seeding
Requires many volunteers
Requires special equipment
Dealing with bird, worm and snow damage
Equipment maintenance
Labour: \$15K to \$30K per year

ARTIFICIAL SURFACE

Experience gained from dealing with artificial outdoor greens since the first UK green in 1976 led to the development of MASTERGREEN™ by Verdemat in 1988 as the ultimate outdoor bowling surface.

It is a fibre bonded material made from specially selected UV and colour stabilised polypropylene fibres. The construction incorporates a tough, dimensionally stable fabric. Use of low glare polypropylene fibre provides a luxurious, non abrasive surface which does not damage bowls.

The Strong, Reliable and Constant Dales **MASTERGREEN™** "County" green is a completely homogeneous surface which does not have a continuous pile which may collapse in time. The manufacturing method makes it dimensionally stable and totally omni-directional. It has not been found necessary to carry out annual retensioning of MASTERGREEN™ surfaces.

Speed on an artificial surface is controlled by the thickness of the underlay. In order to achieve the feel and play of natural grass, Dales recommends 13-14 seconds green speeds, which are considered medium speed. However, speed can be adjusted as per your requirements.

At the 2010 Commonwealth Games in Delhi, Lawn Bowling will be played on artificial surfaces for the first time and they will play on 4 Dales MASTERGREEN™ surfaces.

ARTIFICIAL SURFACE

Occasional Vacuuming
Equipment: (optional) Industrial Wet/dry Vacuum
Estimated purchase cost: \$6-7K.

LIFESPAN

NATURAL SURFACE

When properly maintained, natural surfaces last for a very long time. However, they are labour intensive and annual maintenance is costly.

ARTIFICIAL SURFACE

The lifespan of artificial surfaces is limited by usage. Although Dales offers a 7-year warranty, many of our bowls surfaces have exceeded 15 years.

REPLACEMENT COSTS

NATURAL SURFACE

No replacement is required when properly maintained. However, maintenance costs must be factored-in when comparing with artificial surfaces.

Annual Maintenance:

By Volunteers: \$15,000.

By City employees: \$30,000.

ARTIFICIAL SURFACE

When replacing an artificial surface, only the underlay and the carpet need to be replaced. The costing provided always includes installation by factory specialists. Here's an example.

If the replacement at today's value would be approximately \$85,000. Based on a 10yr lifespan only, the club should put aside \$8,500 annually into the replacement account. This represents an approximate saving of \$5-20,000 annually. And consequently, no additional fees will be required, if you continue to allocate your maintenance budget to the replacement account.

INTANGIBLES

NATURAL SURFACE

Unpredictable weather, adapting to the no pesticide/fungicide program, bird & worm activity, watering restrictions and general maintenance discipline will affect the conditions of the green.

As a result, the surfaces of natural grass greens are often uneven and unpleasant to play on, especially during the peak of the season, resulting in dissatisfied members and visitors and discouraging tournament players and the recruiting of new members.

ARTIFICIAL SURFACE

Satisfaction is probably one of the most significant intangible benefits of an artificial green. None of the maintenance issues associated with natural greens applies.

As a result, the surface is always ready, always green, beautiful, appealing and fun to play on.

A consistently ready surface will make any Club very popular in the tournament circuit.

An artificial green will extend your season by, at least, 2 months. For example, this means that when everyone else shuts down in mid-September, you'll be able to run important Invitational Tournaments until mid-October. If you plan and organize these events cleverly, you will raise between \$500. and \$1,000. every year. You'll never have to worry about surface replacement, but you'll be thinking about a second green.

BUDGETING

ARTIFICIAL SURFACE

No 2 projects are alike. We can only provide a ball park estimate, at this time. For budgeting and grant purposes, we suggest that you budget approximately \$300,000. for a 125' X 125' green. This includes Civil/Drainage works, Elastic Layer and Dales' artificial bowls surface/underlay/ditch and bank shipped from the factory in the U.K. and installed by Dales experts. Allow 4-6 weeks for delivery and 3-6 weeks for installation, 3 weeks if the weather is good.

The Dales MASTERGREEN™ "County" surface/underlay portion for your greens will be approximately \$85,000 per green. Terracotta Surround is an optional extra.

Dales Bowls Canada will be pleased to provide you with a comprehensive custom quote, once your requirements have been refined.